

# PATENT COOPERATION TREATY

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# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:  <div style="text-align: center; margin-top: 100px;">see form PCY/ISA/220</div>		Date of mailing (day/month/year)      see form PCT/ISA/210 (page 2)
Applicant's or agent's file reference see form PCT/ISA/220		<b>FOR FURTHER ACTION</b> See paragraph 2 below
International application No. PCT/EP2005/0050123	International filing date (day/month/year) 01/13/2005	Priority date (day/month/year) 03/06/2004
International Patent Classification (IPC) or both national classification and IPC G01L23/22		
Applicant ROBERT BOSCH GMBH		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I      Basis of the opinion
- ☐ Box No. II      Priority
- ☐ Box No. III      Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV      Lack of unity of invention
- ☒ Box No. V      Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI      Certain documents cited
- ☐ Box No. VII      Certain defects in the international application
- ☐ Box No. VIII      Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ European Patent Office	Authorized officer Debesset, S
Facsimile No.	Telephone No.

EV 884 275 746 US.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/EP2005/0050123

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	7-11	YES
	Claims	1-6,12	NO
Inventive step (IS)	Claims		YES
	Claims	1-12	NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations:

see supplementary page

10/591924

IAP9 Rec'd PCT/PTO 06 SEP 2006

WRITTEN REPORT OF THE INTERNATIONAL SEARCH OFFICE

(SUPPLEMENTARY PAGE)

International File No.

PCT/EP2005/050122

**1 BACKGROUND INFORMATION**

Reference is made to the following document:

D1: EP 1096141 (Denso Corporation)

**2 NOVELTY - Articles 33(1) and (2) PCT**

Document D1 discloses (the references in parentheses relate to this document):

A device for recording the cylinder pressure in an internal combustion engine, in particular in a diesel engine, having a sensor (300) and a glow plug (100), which has a housing (200) via which it is preferably mounted inside a cylinder head (1) of the internal combustion engine; the glow plug (100) having at a first end (201) a heating pin (202) that projects at least partially into a combustion chamber (1a) of the internal combustion engine when the glow plug (100) is installed, and in which the heating pin (202) is affixed inside the glow plug (100) using a fixation member (K1), the sensor (300) being situated between the fixation member (K1) and the second end (204a) of the glow plug (100).

Therefore, the subject matter of Claim 1 is not novel.

The subject matter of Claim 2 is known from document D1, the sensor (300) being separated from the heating pin (202) and affixed inside the glow plug (100) by a fixation element (209, 210).

The subject matter of the Claims 3 - 6, 12 is known from the document D1 (cf. Figure 3 and paragraphs 35, 40).

The subject matter of Claims 2-6, 12 is therefore not novel either.

### **3 INVENTIVE STEP - Articles 33(1) and (3) PCT**

Dependent claims 7-11 do not contain any features which, in combination with the features of any claim to which they refer, satisfies the requirements of the PCT with regard to inventive step. The reasons are as follows:

The use of a spacer member, in particular an intermediate sleeve, for transmitting an axial force is generally known. Therefore, dependent Claims 7 -11 have as their subject matter only minor structural changes of the device according to Claim 1, which lie within the framework of that which one skilled in the art does habitually because of considerations with which he is familiar, particularly because the advantages achieved thereby may be envisaged without difficulty.